

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

## **GUJARAT TECHNOLOGICAL UNIVERSITY**

**ME – SEMESTER III (OLD) – • EXAMINATION – SUMMER 2016**

**Subject Code: 730406**

**Date: 05/05/2016**

**Subject Name: Peripheral System Design & Interfacing**

**Time: 10:30 am to 01:00 pm**

**Total Marks: 70**

**Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) What do you mean by Centronics? Explain Centronics handshaking with timing diagram. **07**
- (b) State and explain GPIB data message terminating method and GPIB polling. **07**
- Q.2** (a) What is PCI bus? What are the benefits of using PCI bus for the data acquisition and imaging application? **07**
- (b) What is data acquisition system? Explain different component of it. **07**
- OR**
- (b) Explain RS – 449 communication interface in detail. **07**
- Q.3** (a) Explain in detail GPIB (data transfer) handshaking with timing diagram. **07**
- (b) Classify GPIB bus signals and explain all of them in detail. **07**
- OR**
- Q.3** (a) State different serial port's registers of PCs. Explain any three of them in detail. **07**
- (b) Explain in detail ECR with bit assignments w.r.to. parallel port. **07**
- Q.4** (a) State different contention schemes in CRT controller. Explain two of them in detail. **07**
- (b) What do you mean by frame synchronism using RES? Explain it in detail with timing diagram. **07**
- OR**
- Q.4** (a) Draw and explain the internal block diagram of keyboard / display interface 8279. **07**
- (b) Write a short note: PID Controller. **07**
- Q.5** (a) How cross compiler and In-circuit emulator are useful in microprocessor based system design? **07**

**(b)** Write a short note on: Microprocessor Development Tools. **07**

**OR**

**Q.5 (a)** Write a short note on: Programmable Logic Controller. **07**

**(b)** State the application of the following bus : S-100, multibus, VESA-VL, current loop, RS-232, ISA, PCI **07**

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